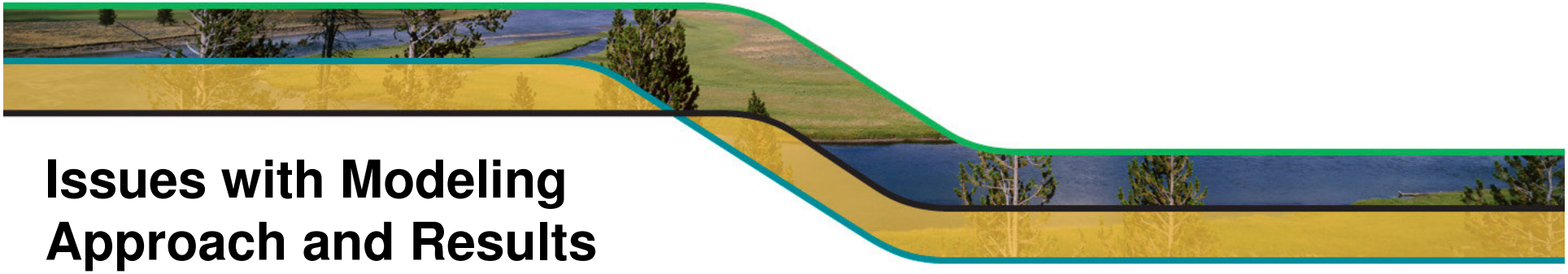
IDAHO POWER®
An IDACORP Company

CAMP MODELING

ENVIRONMENTAL SUB-COMMITTEE

Modeled Shortages and Impacts to Potential Additional Irrigation Diversions



Issues with Modeling Approach and Results

- The use of the ESPAM and SRPM models, run in a iterative manner, have shown implementation of CAMP practices can result in increased reach gains and reservoir storage.
- New reach gains can potentially increase the amount of water available for recharge and system conversions.
- The modeling was done as a difference model with outputs compared to a modeled “Base Case.”

- **Do modeled recharge diversions take water at the exclusion of existing entities who may have otherwise diverted it to fulfill their senior water rights?**

Model Process

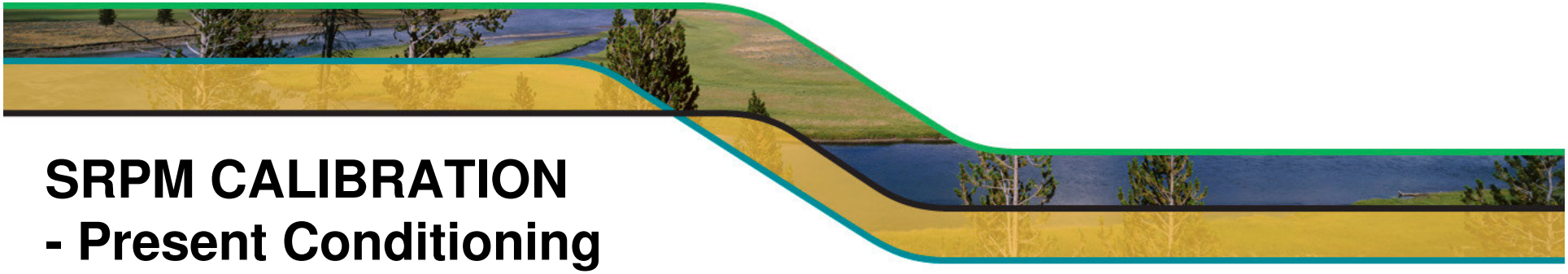
Accounting for Yearly Changes in Water Availability

Determine Water Availability for CAMP Implementation

Determine New Reach Gains and Diversions

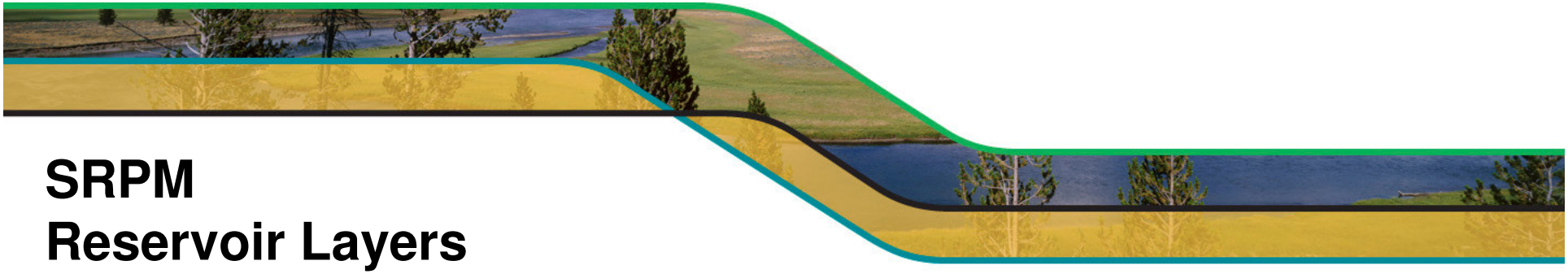
If the output file for SRPM indicates there is an irrigation shortage, diversions for recharge are reduced by the appropriate amount and the ESPAM and SRPM are rerun

Determine New Flows in the Snake River With Planning Model



SRPM CALIBRATION
- Present Conditioning

- The SRPM is present conditioned to mimic actual river flows (average of the last 15 years).
- Irrigation Diversions
  - Historic diversions are present condition and calculated as an average of the diversion for the most recent 15 years (1991-2005).
  - For the most recent 15 years, the actual diversions are used.
- Reach Gains are present condition using a variety of techniques depending on the reach.
- Reservoir layers can also be adjusted to meet river flows and desired reservoir storage.



SRPM
Reservoir Layers

- Reservoirs are “layered” in the model.
- Each reservoir may have up to five layers

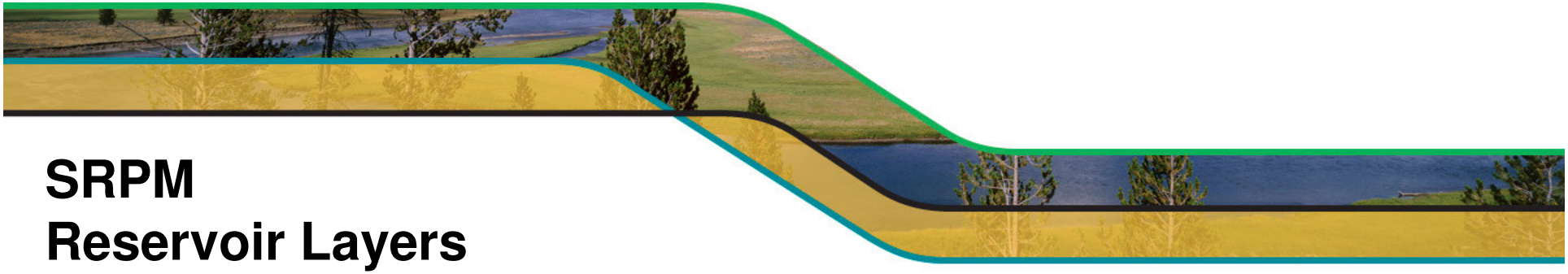
American Falls Reservoir

Layer Number

Reservoir Number

Layer 1 - 1,672,600 Acft in May

AF1	6	10300	12300	14000	14700	15700	16700	16700	16726	16726	15500	13500	9600
AF2	6	9500	11500	12500	12000	12000	12000	15000	15000	12000	9000	8700	8000
AF3	6	2200	5500	8000	8000	10000	11000	11000	13000	8800	4000	1000	2300
AF4	6	1000	3000	7500	7500	9000	10000	0	0	6000	3000	500	0
AF5	6	0	0	0	0	0	0	0	0	5500	2500	300	0

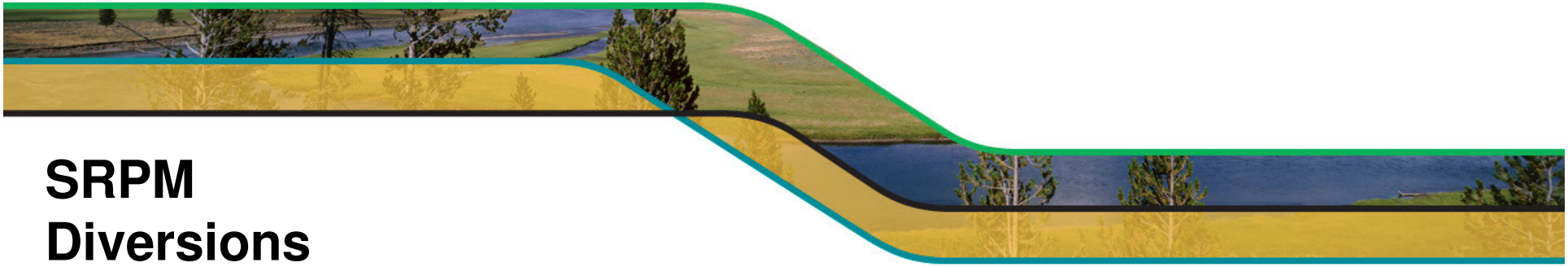


SRPM
Reservoir Layers

- Assigned flows are dependent upon which layers of the reservoirs are filled.

Reach	Reservoir Call Layer	Assigned Flow										
62	1	350	370	220	220	220	220	220	220	220	802	962	220
62	2	300	370	220	220	220	220	220	220	220	802	962	220
62	3	150	370	220	220	220	220	220	220	220	2	2	2
62	4	8	8	220	220	220	220	220	220	220	2	2	2

- Assigned flows are also designated to be called from specific reservoir groups.



SRPM Diversions

- Layers are also used to allow calls by specific diversions.

Reservoir Group Number

Reach Number

Layer Call Number

Diversion Group Type

Diversion Number

Diversion Name

BURLEY South SIDE	260	1	27	60	4
MINIDOKA North SIDE	270	1	28	60	4
Pump DV SNK MNKA-MNR	271	1	14	61	4
South S TWIN FALLS	280	1	14	62	4
MINIDOKA N SIDE PUMP	285	1	28	62	4
MILNER GOODING	290	1	14	62	4
NSCC MILGood Recharg	291	1	27	62	2
North SIDE	300	1	14	62	4

Walcott
American Falls
Palisades
Jackson

Call from 4 layers

Call from 2 layers

Profile Modeled Year 1992

Medium Package Recharge Emphasis

- 1992 was a relatively dry year
- 1992 modeled diversions for recharge and system conversions
  - October: 5,165 Acft
  - March: 98,382 Acft
  - April: 13,091 Acft

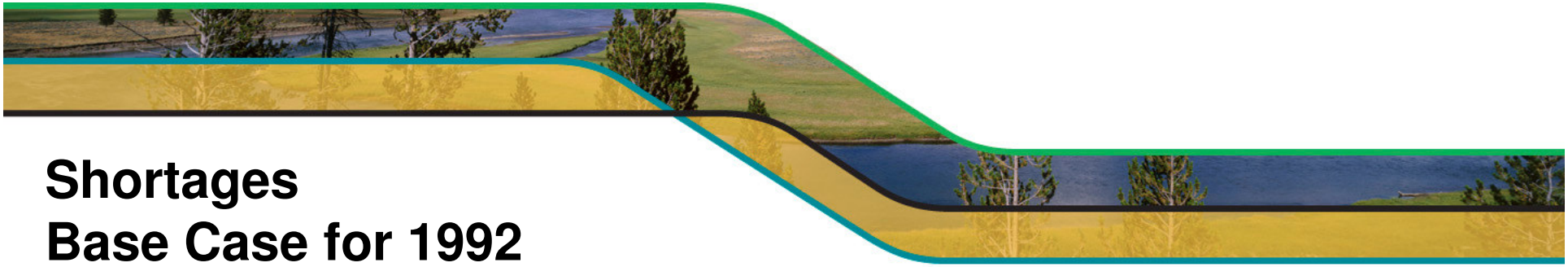
    Total 116,638 Acft
- Total diversions for Twin Falls Canal Company in 1992 were 1,000,500 acft
  - 15 yr Average diversions: 1,070,700 acft
  - 1996 Diversions: 1,172,400 acft
  - 2004 Diversions: 1,000,500 acft
  - 2005 Diversions: 924,400 acft

Modeled Reach Gains for 1992

Increased reach gains as a result of CAMP Implementation from 1980 through 1992

Reach Response for modeled year 1992												
	Response (cfs)											
Month	Ashton-Rexburg	Heise-Shelley	Shelly-Blackfoot	Blackfoot-Neeley	Neeley-Minidoka	Devils Washbow l- Buhl	Buhl- K Springs	K Springs	K Springs-Malad	Malad Reach	Malad-Bankroft	Total (cfs)
Oct	34	58	76	197	41	166	75	59	3	43	3	755
Nov	33	55	69	185	40	159	69	54	3	39	3	708
Dec	32	51	63	174	40	151	65	50	2	37	2	668
Jan	31	49	59	165	40	144	61	47	2	35	2	636
Feb	30	47	56	158	40	138	58	45	2	34	2	610
Mar	30	45	54	152	40	141	63	50	2	37	2	614
Apr	29	44	52	149	40	147	70	55	3	40	2	632
May	29	45	52	148	40	145	66	51	3	38	2	619
Jun	29	45	53	149	40	141	62	48	2	37	2	609
Jul	29	46	53	150	40	137	60	47	2	36	2	603
Aug	30	46	53	150	41	132	58	45	2	35	2	596
Sep	30	47	53	150	41	128	56	44	2	34	2	587
	Response (Acft)											
	22,084	34,821	41,865	116,214	29,186	104,246	46,151	35,914	1,754	26,877	1,784	
	Total Reach Gains Above Milner				244,170				Total Reach Gains		460,897	

Total Model Inputs: 10,299,995 acft Yield: 7,129,715acft Percent Yield: 69%



Shortages
Base Case for 1992

- Shortages are created when diversions within a reach exceed available water supply

DIVERSIONS AND SHORTAGES WATER YEAR 1992

BRANCH	DIVERSIONS	RETURN FLOW	TOTAL SHORT	IRRIG SHORT	FLOW SHORT	OTHER SHORT
Falls River	116.1	6.5	0.0	0.0	0.0	0.0
Teton River	270.6	51.5	0.0	0.0	0.0	0.0
Henrys Fork	549.4	144.6	0.0	0.0	0.0	0.0
Above Lornzo	1459.7	1.2	6.4	0.0	6.4	0.0
Lornzo Blkft	1481.3	322.4	168.7	0.0	168.7	0.0
Willow Creek	193.7	224.4	0.0	0.0	0.0	0.0
Blkft Prtnf	89.5	0.0	169.4	99.0	57.5	12.9
Blkft Milner	3237.9	88.4	0.0	0.0	0.0	0.0
Milner Murphy	478.4	363.1	0.0	0.0	0.0	0.0
Boise River	620.7	0.0	4.0	4.0	0.0	0.0
New Y Canal	331.6	0.0	93.2	93.2	0.0	0.0
Payett River	906.9	1.0	30.8	27.3	0.0	3.5
Murphy Weiser	97.0	14.6	0.0	0.0	0.0	0.0
Weiser Anaton	0.0	0.0	0.0	0.0	0.0	0.0
Clear water	0.0	0.0	0.0	0.0	0.0	0.0
Anaton Icehbr	0.0	0.0	0.0	0.0	0.0	0.0
SYSTEM TOTAL	9832.8	1217.7	472.5	223.5	232.6	16.4

Increased shortages over those in the base case are not allowed

Shortages
1st Recharge Run for 1992

- First run of 1992 that resulted in shortages in the "Blkft Milner" reach

DIVERSIONS AND SHORTAGES WATER YEAR 1992

BRANCH	DIVERSIONS	RETURN FLOW	TOTAL SHORT	IRRIG SHORT	FLOW SHORT	OTHER SHORT
Falls River	116.1	6.5	0.0	0.0	0.0	0.0
Teton River	270.6	51.5	0.0	0.0	0.0	0.0
Henrys Fork	549.4	144.6	0.0	0.0	0.0	0.0
Above Lornzo	1459.7	1.2	6.4	0.0	6.4	0.0
Lornzo Blkft	1481.3	322.4	146.1	0.0	146.1	0.0
Willow Creek	193.7	224.4	0.0	0.0	0.0	0.0
Blkft Prtnf	100.6	0.0	153.5	87.9	54.4	11.2
Blkft Milner	3354.6	90.2	148.4	148.4	0.0	0.0
Milner Murphy	399.3	342.2	0.0	0.0	0.0	0.0
Boise River	620.7	0.0	4.0	4.0	0.0	0.0
New Y Canal	331.6	0.0	93.2	93.2	0.0	0.0
Payett River	906.9	1.0	30.8	27.3	0.0	3.5
Murphy Weiser	69.4	10.4	0.0	0.0	0.0	0.0
Weiser Anaton	0.0	0.0	0.0	0.0	0.0	0.0
Clear water	0.0	0.0	0.0	0.0	0.0	0.0
Anaton Icehbr	0.0	0.0	0.0	0.0	0.0	0.0
SYSTEM TOTAL	9853.9	1194.5	582.4	360.7	206.9	14.7

This diversion is an aggregate for the reach

This shortage is an aggregate for the reach. Reduce diversion and rerun ESPAM and SRPM

Shortages
1st Recharge Run for 1992

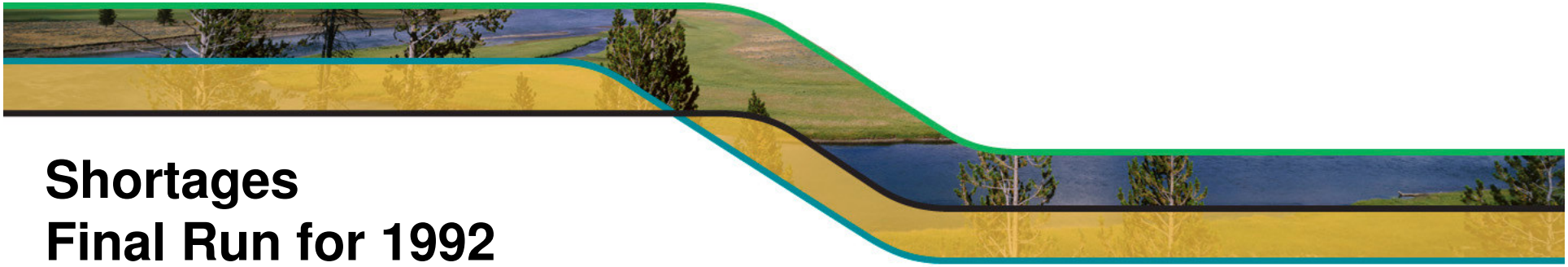
- First run of 1992 that resulted in shortages in the "Blkft Milner" reach

DIVERSIONS AND SHORTAGES WATER YEAR 1992

BRANCH	DIVERSIONS	W SHORT	OTHER SHORT
Falls River	116.1	0.0	0.0
Teton River	270.6	0.0	0.0
Henrys Fork	549.4	0.0	0.0
Above Lornzo	1459.7	6.4	0.0
Lornzo Blkft	1481.3	46.1	0.0
Willow Creek	193.7	0.0	0.0
Blkft Prtnf	100.6	54.4	11.2
Blkft Milner	3354.6	0.0	0.0
Milner Murphy	399.3	0.0	0.0
Boise River	620.7	0.0	0.0
New Y Canal	331.6	0.0	0.0
Payett River	906.9	0.0	3.5
Murphy Weiser	69.4	0.0	0.0
Weiser Anaton	0.0	0.0	0.0
Clear water	0.0	0.0	0.0
Anaton Icehbr	0.0	0.0	0.0
SYSTEM TOTAL	9853.9	06.9	14.7

MICHAUD-FORT HALL	72,400
Pump DV SNK NLY-MNKA	2,100
BURLEY South SIDE	305,100
MINIDOKA North SIDE	343,330
Pump DV SNK MNKA-MNR	3,800
South S TWIN FALLS	1,000,500
MINIDOKA N SIDE PUMP	63,000
MILNER GOODING	384,900
NSCC MILGood Recharg	265,100
North SIDE	1,002,700
MILNER LOW LIFT	60,100
Total	3,503,000
	(3503.0)

1st Run Recharge indicated 265,100 acft of recharge and system conversions



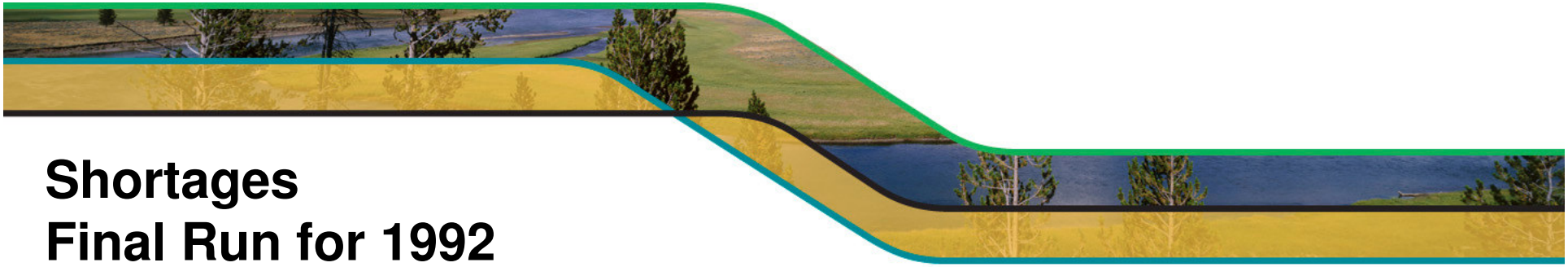
Shortages
Final Run for 1992

DIVERSIONS AND SHORTAGES WATER YEAR 1992

BRANCH	DIVERSIONS	RETURN FLOW	TOTAL SHORT	IRRIG SHORT	FLOW SHORT	OTHER SHORT
Falls River	116.1	6.5	0.0	0.0	0.0	0.0
Teton River	270.6	51.5	0.0	0.0	0.0	0.0
Henrys Fork	549.4	144.6	0.0	0.0	0.0	0.0
Above Lornzo	1459.7	1.2	6.4	0.0	6.4	0.0
Lornzo Blkft	1481.3	322.4	146.1	0.0	146.1	0.0
Willow Creek	193.7	224.4	0.0	0.0	0.0	0.0
Blkft Prtnf	100.6	0.0	153.5	87.9	54.4	11.2
Blkft Milner	3354.6	90.2	0.0	0.0	0.0	0.0
Milner Murphy	399.3	346.7	0.0	0.0	0.0	0.0
Boise River	620.7	0.0	4.0	4.0	0.0	0.0
New Y Canal	331.6	0.0	93.2	93.2	0.0	0.0
Payett River	906.9	1.0	30.8	27.3	0.0	3.5
Murphy Weiser	69.4	10.4	0.0	0.0	0.0	0.0
Weiser Anaton	0.0	0.0	0.0	0.0	0.0	0.0
Clear water	0.0	0.0	0.0	0.0	0.0	0.0
Anaton Icehbr	0.0	0.0	0.0	0.0	0.0	0.0
SYSTEM TOTAL	9853.9	1199.0	434.0	212.3	206.9	14.7

Diversion volumes does not change

Shortage is corrected in Final Run



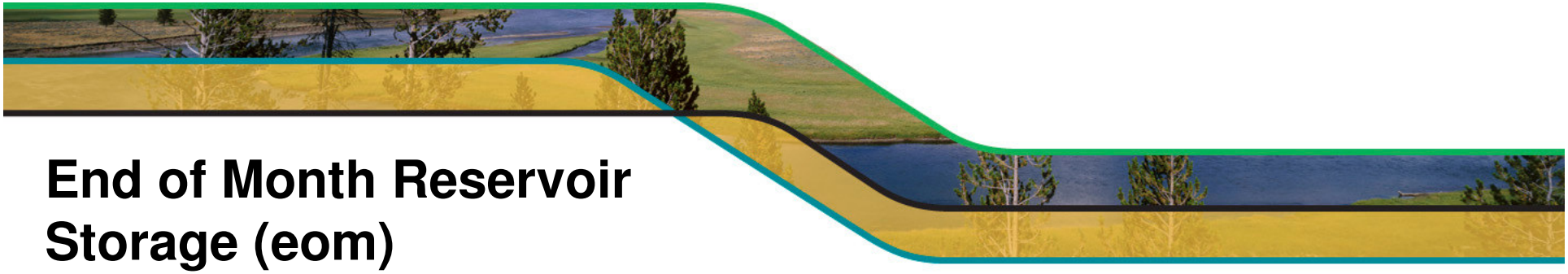
Shortages
Final Run for 1992

DIVERSIONS AND SHORTAGES WATER YEAR 1992

BRANCH	DIVERSIONS				LOW SHORT	OTHER SHORT
Falls River	116.1				0.0	0.0
Teton River	270.6				0.0	0.0
Henrys Fork	549.4				0.0	0.0
Above Lornzo	1459.7				6.4	0.0
Lornzo Blkft	1481.3				146.1	0.0
Willow Creek	193.7				0.0	0.0
Blkft Prtnf	100.6				54.4	11.2
Blkft Milner	3354.6				0.0	0.0
Milner Murphy	399.3				0.0	0.0
Boise River	620.7				0.0	0.0
New Y Canal	331.6				0.0	0.0
Payett River	906.9				0.0	3.5
Murphy Weiser	69.4				0.0	0.0
Weiser Anaton	0.0				0.0	0.0
Clear water	0.0				0.0	0.0
Anaton Icehbr	0.0				0.0	0.0
SYSTEM TOTAL	9853.9	1199.0	434.0	212.3	206.9	14.7

MICHAUD-FORT HALL	72,400
Pump DV SNK NLY-MNKA	2,100
BURLEY South SIDE	305,100
MINIDOKA North SIDE	343,330
Pump DV SNK MNKA-MNR	3,800
South S TWIN FALLS	1,000,500
MINIDOKA N SIDE PUMP	63,000
MILNER GOODING	384,900
NSCC MILGood Recharg	116,700
North SIDE	1,002,700
MILNER LOW LIFT	60,100

Final Run Recharge indicated 116,700 acft of recharge and system conversions



End of Month Reservoir Storage (eom)

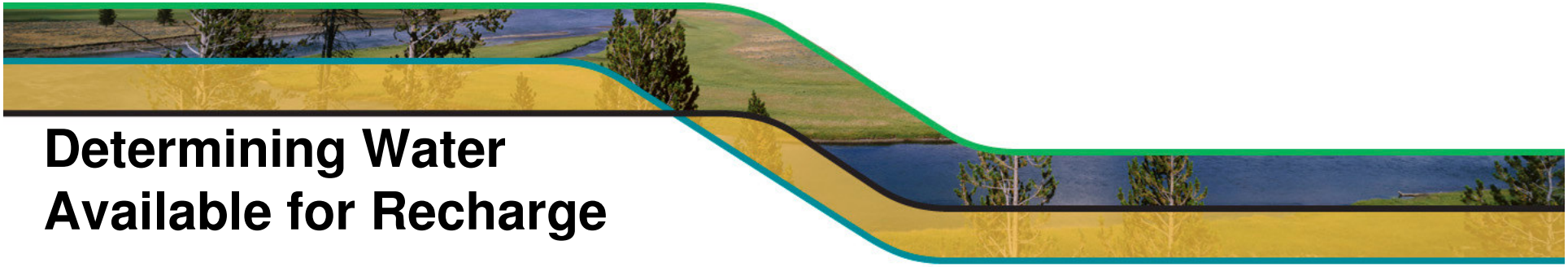
Base

W-YR	MO	*---Jackson Lake--- in	eom	out	**-----Palisades----- in	eom	out	*--American Falls--* in	eom	out	Snake Milner
1992	OCT	22.4	640.0	28.8	196.6	500.2	231.4	263.6	543.6	156.6	18.4
1992	NOV	29.1	640.0	29.1	177.2	612.0	65.5	317.5	837.4	23.8	36.2
1992	DEC	25.1	640.0	25.1	143.7	688.0	67.6	302.4	1115.2	24.6	47.2
1992	JAN	21.2	636.6	24.6	136.8	740.6	84.2	277.5	1355.8	36.9	56.8
1992	FEB	22.8	636.4	23.0	128.1	791.2	77.5	286.0	1570.0	71.8	89.4
1992	MAR	24.2	639.1	21.5	162.2	872.7	80.7	257.9	1670.0	157.9	104.8
1992	APR	105.5	537.4	203.7	417.7	1034.2	254.0	269.8	1500.0	413.9	8.4
1992	MAY	235.5	550.0	217.1	637.3	839.3	828.4	313.1	1135.4	636.7	0.9
1992	JUN	120.8	643.6	17.9	314.0	563.9	584.7	213.1	738.8	570.7	0.9
1992	JUL	81.8	450.0	264.7	457.4	386.9	630.3	323.5	400.0	629.9	37.6
1992	AUG	46.7	250.0	236.9	359.0	318.5	424.3	273.9	100.0	551.8	20.2
1992	SEP	28.3	163.3	109.5	234.4	220.0	331.1	279.3	146.6	223.2	13.1
1992	TOTAL	763.4		1201.9	3364.4		3659.6	3377.6		3497.7	434.0

Final

W-YR	MO	*---Jackson Lake--- in	eom	out	**-----Palisades----- in	eom	out	*--American Falls--* in	eom	out	Snake Milner
1992	OCT	22.4	640.0	28.8	196.6	530.3	231.4	286.1	594.8	155.7	18.4
1992	NOV	29.1	640.0	29.1	177.2	642.0	65.5	337.8	910.4	24.0	38.6
1992	DEC	25.1	640.0	25.1	143.7	718.1	67.6	323.9	1209.8	24.6	49.7
1992	JAN	21.2	636.6	24.6	136.8	775.6	79.3	291.2	1464.1	36.9	59.3
1992	FEB	22.8	636.4	23.0	128.1	830.5	73.2	297.9	1570.0	190.2	211.8
1992	MAR	24.2	639.1	21.5	162.2	916.6	76.1	270.6	1670.0	170.6	21.3
1992	APR	105.5	540.0	201.1	402.0	1078.0	238.3	285.1	1500.0	429.2	13.1
1992	MAY	235.5	550.0	219.1	652.9	842.2	884.5	372.9	1198.2	646.8	13.5
1992	JUN	120.8	643.6	17.9	314.0	566.4	585.4	230.8	808.7	580.5	13.1
1992	JUL	81.8	450.0	264.7	457.4	390.0	629.7	340.2	476.2	639.0	49.3
1992	AUG	46.7	250.0	236.9	359.0	320.0	425.8	291.0	155.8	588.3	59.2
1992	SEP	28.3	169.3	103.5	228.4	220.0	326.6	288.2	216.5	216.3	0.1
1992	TOTAL	763.4		1195.8	3358.3		3683.3	3615.9		3702.1	542.6

Additional 70.5 KAF in storage at the end of the year
Additional 108.6 KAF has run past Milner



Determining Water Available for Recharge

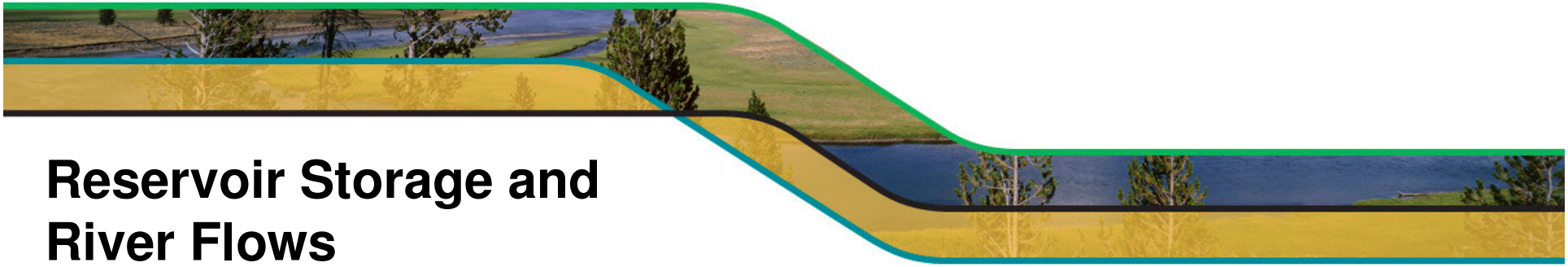
- After completion of modeling year 1991, the calculated flows for 1992 at Milner are used to determine the amount of water that can be diverted for recharge and system conversions
- Calculated flows at Milner are in part determined by the assigned flows
- Diversion for recharge and system conversions cannot exceed the flows at Milner

1991 Out file

		*---Jackson Lake---**			-----Palisades-----			*--American Falls--*			Snake
W-YR	MO	in	eom	out	in	eom	out	in	eom	out	Milner
1992	OCT	22.4	640.0	28.8	196.6	530.3	231.4	286.1	594.8	154.1	18.4
1992	NOV	29.1	640.0	29.1	177.2	642.0	65.5	337.8	910.4	23.8	38.6
1992	DEC	25.1	640.0	25.1	143.7	718.1	67.6	323.9	1209.8	24.6	49.7
1992	JAN	21.2	636.6	24.6	136.8	775.6	79.3	291.2	1464.1	36.9	59.3
1992	FEB	22.8	636.4	23.0	128.1	830.5	73.2	297.9	1570.0	192.0	211.8
1992	MAR	24.2	639.1	21.5	162.2	916.6	76.1	270.6	1670.0	170.6	120.0
1992	APR	105.5	540.0	201.1	402.0	1078.0	238.3	272.0	1500.0	416.1	13.1
1992	MAY	235.5	550.0	219.1	652.9	842.2	884.5	386.0	1198.2	646.8	13.5
1992	JUN	120.8	643.6	17.9	314.0	566.4	585.4	230.8	808.7	580.5	13.1
1992	JUL	81.8	450.0	264.7	457.4	390.0	629.7	340.2	476.2	639.0	49.3
1992	AUG	46.7	250.0	236.9	359.0	320.0	425.8	291.0	155.8	588.3	59.2
1992	SEP	28.3	169.3	103.5	228.4	220.0	326.6	288.2	216.5	216.3	0.1
1992	TOTAL	763.4		1195.8	3358.3		3683.3	3615.8		3689.0	646.2

Values that determine the maximum amount that can be diverted for recharge and system conversions

In the model only 98.4 KAF was recharged because of canal capacity



Reservoir Storage and River Flows

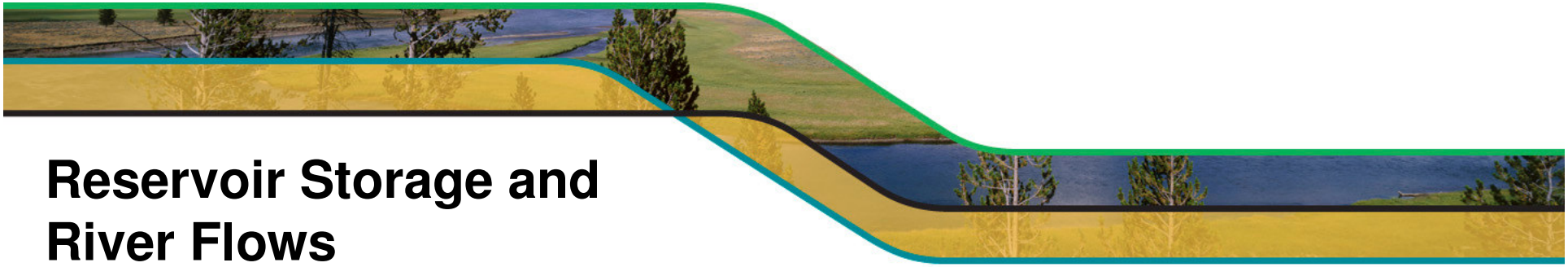
1991 Out file

		*---Jackson Lake---**-----Palisades-----*						*--American Falls--*			Snake
W-YR	MO	in	eom	out	in	eom	out	in	eom	out	Milner
1992	OCT	22.4	640.0	28.8	196.6	530.3	231.4	286.1	594.8	154.1	18.4
1992	NOV	29.1	640.0	29.1	177.2	642.0	65.5	337.8	910.4	23.8	38.6
1992	DEC	25.1	640.0	25.1	143.7	718.1	67.6	323.9	1209.8	24.6	49.7
1992	JAN	21.2	636.6	24.6	136.8	775.6	79.3	291.2	1464.1	36.9	59.3
1992	FEB	22.8	636.4	23.0	128.1	830.5	73.2	297.9	1570.0	192.0	211.8
1992	MAR	24.2	639.1	21.5	162.2	916.6	76.1	270.6	1670.0	170.6	120.0
1992	APR	105.5	540.0	201.1	402.0	1078.0	238.3	272.0	1500.0	416.1	13.1
1992	MAY	235.5	550.0	219.1	652.9	842.2	884.5	386.0	1198.2	646.8	13.5
1992	JUN	120.8	643.6	17.9	314.0	566.4	585.4	230.8	808.7	580.5	13.1
1992	JUL	81.8	450.0	264.7	457.4	390.0	629.7	340.2	476.2	639.0	49.3
1992	AUG	46.7	250.0	236.9	359.0	320.0	425.8	291.0	155.8	588.3	59.2
1992	SEP	28.3	169.3	103.5	228.4	220.0	326.6	288.2	216.5	216.3	0.1
1992	TOTAL	763.4		1195.8	3358.3		3683.3	3615.8		3689.0	646.2

Final

		*---Jackson Lake---**-----Palisades-----*						*--American Falls--*			Snake
W-YR	MO	in	eom	out	in	eom	out	in	eom	out	Milner
1992	OCT	22.4	640.0	28.8	196.6	530.3	231.4	286.1	594.8	155.7	18.4
1992	NOV	29.1	640.0	29.1	177.2	642.0	65.5	337.8	910.4	24.0	38.6
1992	DEC	25.1	640.0	25.1	143.7	718.1	67.6	323.9	1209.8	24.6	49.7
1992	JAN	21.2	636.6	24.6	136.8	775.6	79.3	291.2	1464.1	36.9	59.3
1992	FEB	22.8	636.4	23.0	128.1	830.5	73.2	297.9	1570.0	190.2	211.8
1992	MAR	24.2	639.1	21.5	162.2	916.6	76.1	270.6	1670.0	170.6	21.3
1992	APR	105.5	540.0	201.1	402.0	1078.0	238.3	285.1	1500.0	429.2	13.1
1992	MAY	235.5	550.0	219.1	652.9	842.2	884.5	372.9	1198.2	646.8	13.5
1992	JUN	120.8	643.6	17.9	314.0	566.4	585.4	230.8	808.7	580.5	13.1
1992	JUL	81.8	450.0	264.7	457.4	390.0	629.7	340.2	476.2	639.0	49.3
1992	AUG	46.7	250.0	236.9	359.0	320.0	425.8	291.0	155.8	588.3	59.2
1992	SEP	28.3	169.3	103.5	228.4	220.0	326.6	288.2	216.5	216.3	0.1
1992	TOTAL	763.4		1195.8	3358.3		3683.3	3615.9		3702.1	542.6

March Recharge of 98.4 KAF



Reservoir Storage and River Flows

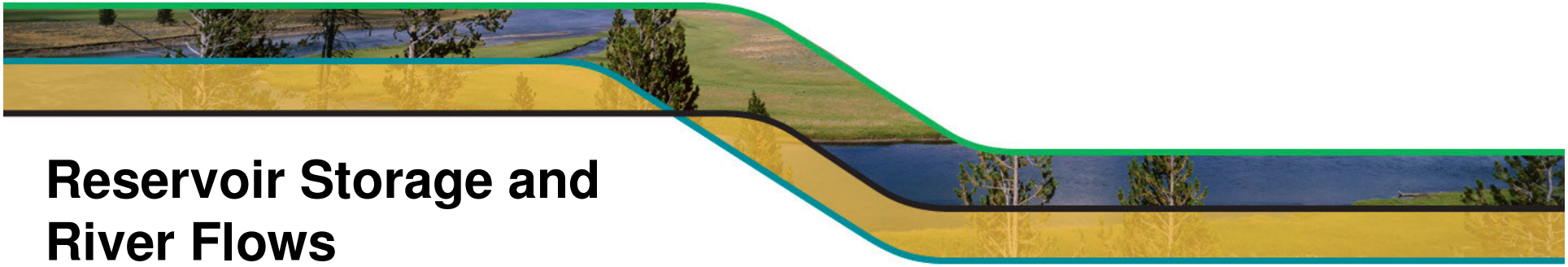
1991 Out file

W-YR	MO	*---Jackson Lake---** in	eom	out	-----Palisades-----* in	eom	out	*--American Falls--* in	eom	out	Snake Milner
1992	OCT	22.4	640.0	28.8	196.6	530.3	231.4	286.1	594.8	154.1	18.4
1992	NOV	29.1	640.0	29.1	177.2	642.0	65.5	337.8	910.4	23.8	38.6
1992	DEC	25.1	640.0	25.1	143.7	718.1	67.6	323.9	1209.8	24.6	49.7
1992	JAN	21.2	636.6	24.6	136.8	775.6	79.3	291.2	1464.1	36.9	59.3
1992	FEB	22.8	636.4	23.0	128.1	830.5	73.2	297.9	1570.0	192.0	211.8
1992	MAR	24.2	639.1	21.5	162.2	916.6	76.1	270.6	1670.0	170.6	120.0
1992	APR	105.5	540.0	201.1	402.0	1078.0	238.3	272.0	1500.0	416.1	13.1
1992	MAY	235.5	550.0	219.1	652.9	842.2	884.5	386.0	1198.2	646.8	13.5
1992	JUN	120.8	643.6	17.9	314.0	566.4	585.4	230.8	808.7	580.5	13.1
1992	JUL	81.8	450.0	264.7	457.4	390.0	629.7	340.2	476.2	639.0	49.3
1992	AUG	46.7	250.0	236.9	359.0	320.0	425.8	291.0	155.8	588.3	59.2
1992	SEP	28.3	169.3	103.5	228.4	220.0	326.6	288.2	216.5	216.3	0.1
1992	TOTAL	763.4		1195.8	3358.3		3683.3	3615.8		3689.0	646.2

Final

W-YR	MO	*---Jackson Lake---** in	eom	out	-----Palisades-----* in	eom	out	*--American Falls--* in	eom	out	Snake Milner
1992	OCT	22.4	640.0	28.8	196.6	530.3	231.4	286.1	594.8	155.7	18.4
1992	NOV	29.1	640.0	29.1	177.2	642.0	65.5	337.8	910.4	24.0	38.6
1992	DEC	25.1	640.0	25.1	143.7	718.1	67.6	323.9	1209.8	24.6	49.7
1992	JAN	21.2	636.6	24.6	136.8	775.6	79.3	291.2	1464.1	36.9	59.3
1992	FEB	22.8	636.4	23.0	128.1	830.5	73.2	297.9	1570.0	190.2	211.8
1992	MAR	24.2	639.1	21.5	162.2	916.6	76.1	270.6	1670.0	170.6	21.3
1992	APR	105.5	540.0	201.1	402.0	1078.0	238.3	285.1	1500.0	429.2	13.1
1992	MAY	235.5	550.0	219.1	652.9	842.2	884.5	372.9	1198.2	646.8	13.5
1992	JUN	120.8	643.6	17.9	314.0	566.4	585.4	230.8	808.7	580.5	13.1
1992	JUL	81.8	450.0	264.7	457.4	390.0	629.7	340.2	476.2	639.0	49.3
1992	AUG	46.7	250.0	236.9	359.0	320.0	425.8	291.0	155.8	588.3	59.2
1992	SEP	28.3	169.3	103.5	228.4	220.0	326.6	288.2	216.5	216.3	0.1
1992	TOTAL	763.4		1195.8	3358.3		3683.3	3615.9		3702.1	542.6

April Recharge of 13.1 KAF



Reservoir Storage and River Flows

1991 Out file

		*---Jackson Lake---**			-----Palisades-----*			*--American Falls--*			Snake
W-YR	MO	in	eom	out	in	eom	out	in	eom	out	Milner
1992	OCT	22.4	640.0	28.8	196.6	530.3	231.4	286.1	594.8	154.1	18.4
1992	NOV	29.1	640.0	29.1	177.2	642.0	65.5	337.8	910.4	23.8	38.6
1992	DEC	25.1	640.0	25.1	143.7	718.1	67.6	323.9	1209.8	24.6	49.7
1992	JAN	21.2	636.6	24.6	136.8	775.6	79.3	291.2	1464.1	36.9	59.3
1992	FEB	22.8	636.4	23.0	128.1	830.5	73.2	297.9	1570.0	192.0	211.8
1992	MAR	24.2	639.1	21.5	162.2	916.6	76.1	270.6	1670.0	170.6	120.0
1992	APR	105.5	540.0	201.1	402.0	1078.0	238.3	272.0	1500.0	416.1	13.1
1992	MAY	235.5	550.0	219.1	652.9	842.2	884.5	386.0	1198.2	646.8	13.5
1992	JUN	120.8	643.6	17.9	314.0	566.4	585.4	230.8	808.7	580.5	13.1
1992	JUL	81.8	450.0	264.7	457.4	390.0	629.7	340.2	476.2	639.0	49.3
1992	AUG	46.7	250.0	236.9	359.0	320.0	425.8	291.0	155.8	588.3	59.2
1992	SEP	28.3	169.3	103.5	228.4	220.0	326.6	288.2	216.5	216.3	0.1
1992	TOTAL	763.4		1195.8	3358.3		3683.3	3615.8		3689.0	646.2

Final

		*---Jackson Lake---**			-----Palisades-----*			*--American Falls--*			Snake
W-YR	MO	in	eom	out	in	eom	out	in	eom	out	Milner
1992	OCT	22.4	640.0	28.8	196.6	530.3	231.4	286.1	594.8	155.7	18.4
1992	NOV	29.1	640.0	29.1	177.2	642.0	65.5	337.8	910.4	24.0	38.6
1992	DEC	25.1	640.0	25.1	143.7	718.1	67.6	323.9	1209.8	24.6	49.7
1992	JAN	21.2	636.6	24.6	136.8	775.6	79.3	291.2	1464.1	36.9	59.3
1992	FEB	22.8	636.4	23.0	128.1	830.5	73.2	297.9	1570.0	190.2	211.8
1992	MAR	24.2	639.1	21.5	162.2	916.6	76.1	270.6	1670.0	170.6	21.3
1992	APR	105.5	540.0	201.1	402.0	1078.0	238.3	285.1	1500.0	429.2	13.1
1992	MAY	235.5	550.0	219.1	652.9	842.2	884.5	372.9	1198.2	646.8	13.5
1992	JUN	120.8	643.6	17.9	314.0	566.4	585.4	230.8	808.7	580.5	13.1
1992	JUL	81.8	450.0	264.7	457.4	390.0	629.7	340.2	476.2	639.0	49.3
1992	AUG	46.7	250.0	236.9	359.0	320.0	425.8	291.0	155.8	588.3	59.2
1992	SEP	28.3	169.3	103.5	228.4	220.0	326.6	288.2	216.5	216.3	0.1
1992	TOTAL	763.4		1195.8	3358.3		3683.3	3615.9		3702.1	542.6

No Recharge in May because Jackson, Palisades and American Falls drop to Layer 3

Layers 2 and 3 for May	
American Falls	1500
	1300
Palisades	1300
	850
Jackson	820
	550

Call Layers of Diversions

BURLEY South SIDE	260	1	27	60	4
MINIDOKA North SIDE	270	1	28	60	4
Pump DV SNK MNKA-MNR	271	1	14	61	4
South S TWIN FALLS	280	1	14	62	4
MINIDOKA N SIDE PUMP	285	1	28	62	4
MILNER GOODING	290	1	14	62	4
NSCC MILGood Recharg	291	1	27	62	2
North SIDE	300	1	14	62	4

Call from 4 layers

Call from 2 layers

Final

		---Jackson Lake---			**-----Palisades-----*			*--American Falls--*			Snake
W-YR	MO	in	eom	out	in	eom	out	in	eom	out	Milner
1992	OCT	22.4	640.0	28.8	196.6	530.3	231.4	286.1	594.8	155.7	18.4
1992	NOV	29.1	640.0	29.1	177.2	642.0	65.5	337.8	910.4	24.0	38.6
1992	DEC	25.1	640.0	25.1	143.7	718.1	67.6	323.9	1209.8	24.6	49.7
1992	JAN	21.2	636.6	24.6	136.8	775.6	79.3	291.2	1464.1	36.9	59.3
1992	FEB	22.8	636.4	23.0	128.1	830.5	73.2	297.9	1570.0	190.2	211.8
1992	MAR	24.2	639.1	21.5	162.2	916.6	76.1	270.6	1670.0	170.6	21.3
1992	APR	105.5	540.0	201.1	402.0	1078.0	238.3	285.1	1500.0	429.2	13.1
1992	MAY	235.5	550.0	219.1	652.9	842.2	884.5	372.9	1198.2	646.8	13.5
1992	JUN	120.8	643.6	17.9	314.0	566.4	585.4	230.8	808.7	580.5	13.1
1992	JUL	81.8	450.0	264.7	457.4	390.0	629.7	340.2	476.2	639.0	49.3
1992	AUG	46.7	250.0	236.9	359.0	320.0	425.8	291.0	155.8	588.3	59.2
1992	SEP	28.3	169.3	103.5	228.4	220.0	326.6	288.2	216.5	216.3	0.1
1992	TOTAL	763.4		1195.8	3358.3		3683.3	3615.9		3702.1	542.6

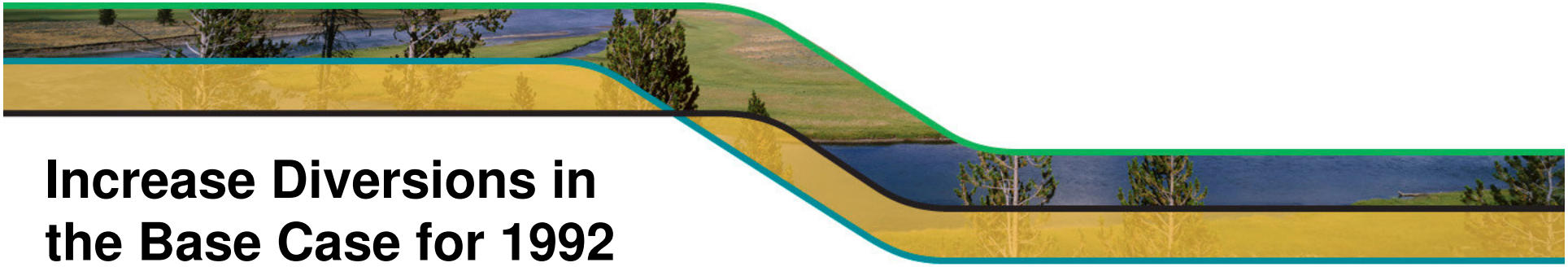
Layers 2 and 3 for May	
American Falls	1500
	1300
Palisades	1300
	850
Jackson	820
	550

Impact of recharge diversion on potential irrigation diversions

- **In the model, do diversions for recharge take water that would have otherwise gone to existing irrigation entities in water short years?**

- Increase the Twin Falls diversion from the original 1992 diversions of 1,000,500 acft to 1996 diversions of 1,172,400*, an increase of 171,900 acft.

*Average diversion from 1909 through 2004 is 1178.3 KAF



Increase Diversions in the Base Case for 1992

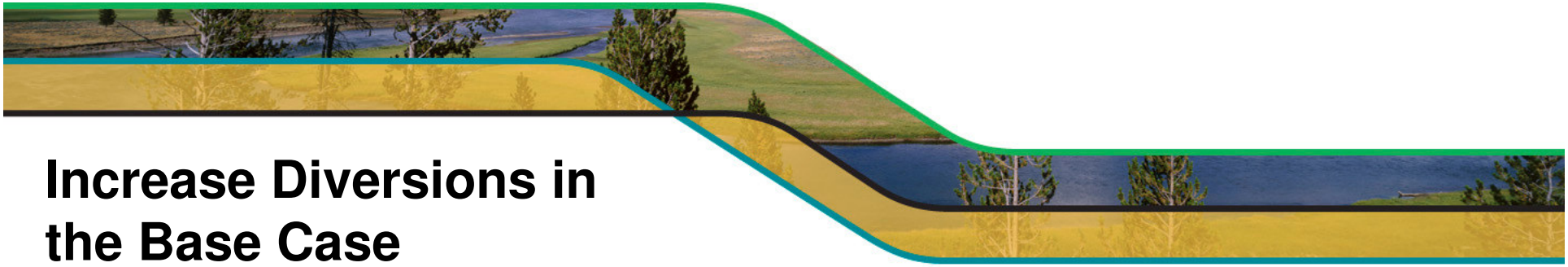
Original Base Case

Shortages in the original base case 472.5 KAF

DIVERSIONS AND SHORTAGES WATER YEAR 1992

BRANCH	DIVERSIONS	RETURN FLOW	TOTAL SHORT	IRRIG SHORT	FLOW SHORT	OTHER SHORT
Falls River	116.1	6.5	0.0	0.0	0.0	0.0
Teton River	270.6	51.5	0.0	0.0	0.0	0.0
Henrys Fork	549.4	144.6	0.0	0.0	0.0	0.0
Above Lornzo	1459.7	1.2	6.4	0.0	6.4	0.0
Lornzo Blkft	1481.3	322.4	168.7	0.0	168.7	0.0
Willow Creek	193.7	224.4	0.0	0.0	0.0	0.0
Blkft Prtnf	89.5	0.0	169.4	99.0	57.5	12.9
Blkft Milner	3237.9	88.4	0.0	0.0	0.0	0.0
Milner Murphy	478.4	363.1	0.0	0.0	0.0	0.0
Boise River	620.7	0.0	4.0	4.0	0.0	0.0
New Y Canal	331.6	0.0	93.2	93.2	0.0	0.0
Payett River	906.9	1.0	30.8	27.3	0.0	3.5
Murphy Weiser	97.0	14.6	0.0	0.0	0.0	0.0
Weiser Anaton	0.0	0.0	0.0	0.0	0.0	0.0
Clear water	0.0	0.0	0.0	0.0	0.0	0.0
Anaton Icehbr	0.0	0.0	0.0	0.0	0.0	0.0
SYSTEM TOTAL	9832.8	1217.7	472.5	223.5	232.6	16.4

Shortages in base of 472.5



Increase Diversions in the Base Case

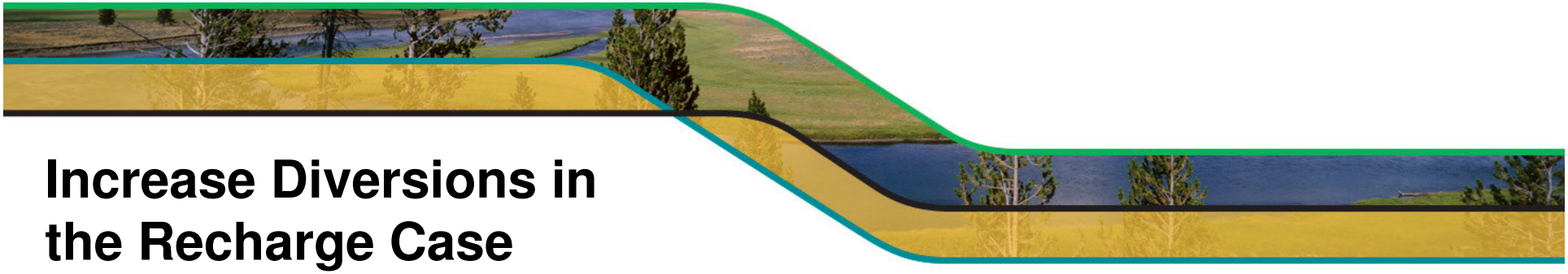
Increased Diversion Base Case

Shortages in the original base case 472.5 KAF

DIVERSIONS AND SHORTAGES WATER YEAR 1992

BRANCH	DIVERSIONS	RETURN FLOW	TOTAL SHORT	IRRIG SHORT	FLOW SHORT	OTHER SHORT
Falls River	116.1	6.5	0.0	0.0	0.0	0.0
Teton River	270.6	51.5	0.0	0.0	0.0	0.0
Henrys Fork	549.4	144.6	0.0	0.0	0.0	0.0
Above Lornzo	1459.7	1.2	6.4	0.0	6.4	0.0
Lornzo Blkft	1481.3	322.4	168.7	0.0	168.7	0.0
Willow Creek	193.7	224.4	0.0	0.0	0.0	0.0
Blkft Prtnf	89.5	0.0	169.4	99.0	57.5	12.9
Blkft Milner	3349.4	88.4	58.6	58.6	0.0	0.0
Milner Murphy	478.4	372.9	0.0	0.0	0.0	0.0
Boise River	620.7	0.0	4.0	4.0	0.0	0.0
New Y Canal	331.6	0.0	93.2	93.2	0.0	0.0
Payett River	906.9	1.0	30.8	27.3	0.0	3.5
Murphy Weiser	97.0	14.6	0.0	0.0	0.0	0.0
Weiser Anaton	0.0	0.0	0.0	0.0	0.0	0.0
Clear water	0.0	0.0	0.0	0.0	0.0	0.0
Anaton Icehbr	0.0	0.0	0.0	0.0	0.0	0.0
SYSTEM TOTAL	9944.3	1227.5	531.1	282.1	232.6	16.4

Shortages increase by 58.6 KAF (58.6 Irrigation)



Increase Diversions in the Recharge Case

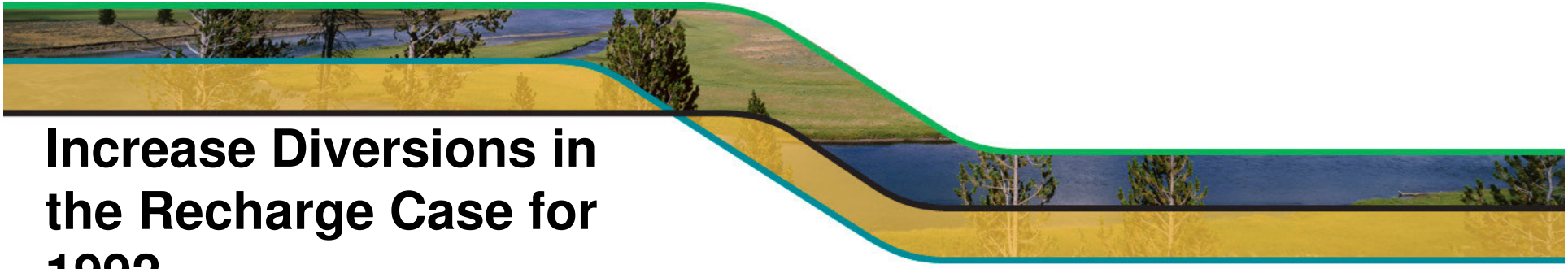
Original Recharge Case

Shortages in the original Recharge case 434.0 KAF

DIVERSIONS AND SHORTAGES WATER YEAR 1992

BRANCH	DIVERSIONS	RETURN FLOW	TOTAL SHORT	IRRIG SHORT	FLOW SHORT	OTHER SHORT
Falls River	116.1	6.5	0.0	0.0	0.0	0.0
Teton River	270.6	51.5	0.0	0.0	0.0	0.0
Henrys Fork	549.4	144.6	0.0	0.0	0.0	0.0
Above Lornzo	1459.7	1.2	6.4	0.0	6.4	0.0
Lornzo Blkft	1481.3	322.4	146.1	0.0	146.1	0.0
Willow Creek	193.7	224.4	0.0	0.0	0.0	0.0
Blkft Prtnf	100.6	0.0	153.5	87.9	54.4	11.2
Blkft Milner	3354.6	90.2	0.0	0.0	0.0	0.0
Milner Murphy	399.3	346.7	0.0	0.0	0.0	0.0
Boise River	620.7	0.0	4.0	4.0	0.0	0.0
New Y Canal	331.6	0.0	93.2	93.2	0.0	0.0
Payett River	906.9	1.0	30.8	27.3	0.0	3.5
Murphy Weiser	69.4	10.4	0.0	0.0	0.0	0.0
Weiser Anaton	0.0	0.0	0.0	0.0	0.0	0.0
Clear water	0.0	0.0	0.0	0.0	0.0	0.0
Anaton Icehbr	0.0	0.0	0.0	0.0	0.0	0.0
SYSTEM TOTAL	9853.9	1199.0	434.0	212.3	206.9	14.7

Shortage in original recharge case of 434.0



Increase Diversions in the Recharge Case for 1992

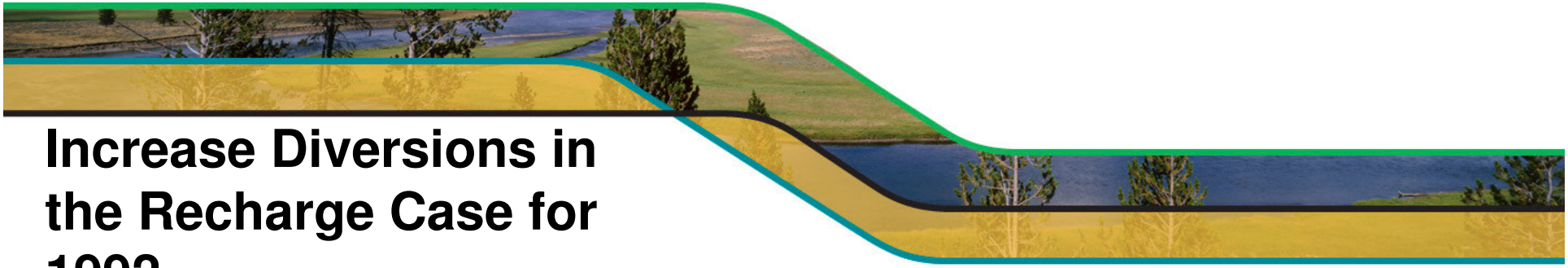
Increased Diversion Recharge Case

Shortages in the original Recharge case 434.0 KAF

DIVERSIONS AND SHORTAGES WATER YEAR 1992

BRANCH	DIVERSIONS	RETURN FLOW	TOTAL SHORT	IRRIG SHORT	FLOW SHORT	OTHER SHORT
Falls River	116.1	6.5	0.0	0.0	0.0	0.0
Teton River	270.6	51.5	0.0	0.0	0.0	0.0
Henrys Fork	549.4	144.6	0.0	0.0	0.0	0.0
Above Lornzo	1459.7	1.2	6.4	0.0	6.4	0.0
Lornzo Blkft	1481.3	322.4	146.1	0.0	146.1	0.0
Willow Creek	193.7	224.4	0.0	0.0	0.0	0.0
Blkft Prtnf	100.6	0.0	153.5	87.9	54.4	11.2
Blkft Milner	3524.7	90.2	0.0	0.0	0.0	0.0
Milner Murphy	399.3	358.7	0.0	0.0	0.0	0.0
Boise River	620.7	0.0	4.0	4.0	0.0	0.0
New Y Canal	331.6	0.0	93.2	93.2	0.0	0.0
Payett River	906.9	1.0	30.8	27.3	0.0	3.5
Murphy Weiser	69.4	10.4	0.0	0.0	0.0	0.0
Weiser Anaton	0.0	0.0	0.0	0.0	0.0	0.0
Clear water	0.0	0.0	0.0	0.0	0.0	0.0
Anaton Icehbr	0.0	0.0	0.0	0.0	0.0	0.0
SYSTEM TOTAL	10024.0	1211.0	434.0	212.3	206.9	14.7

Shortages increase by 0.0 KAF



Increase Diversions in the Recharge Case for 1992

Where did the water come from to fill in the increased diversions?

Original Recharge

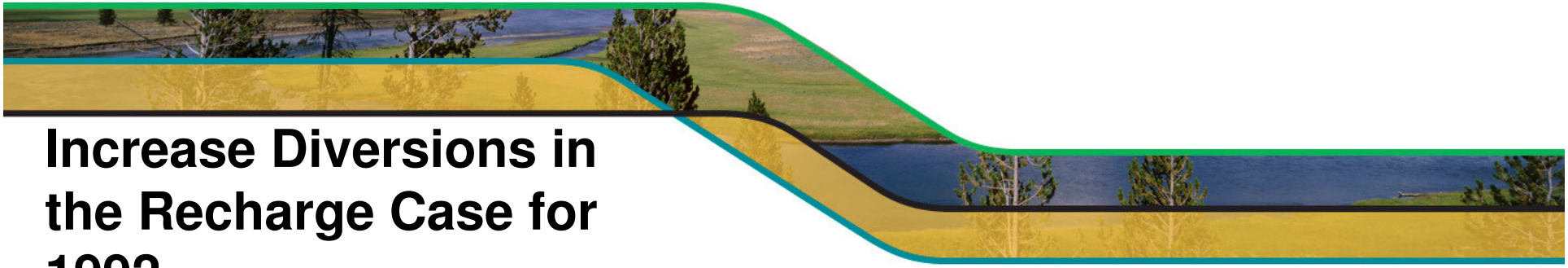
W-YR	MO	*--American Falls--* in	eom	out	*---Lake Walcott---* in	eom	out	Snake Milner
1992	OCT	286.1	594.8	155.7	172.5	30.0	177.0	18.4
1992	NOV	337.8	908.7	24.0	34.8	38.0	26.8	35.2
1992	DEC	323.9	1208.0	24.6	33.6	38.0	33.6	49.7
1992	JAN	291.2	1462.4	36.9	45.8	38.0	45.8	59.3
1992	FEB	297.9	1570.0	190.2	199.0	38.0	199.0	210.0
1992	MAR	270.6	1670.0	170.6	171.5	90.0	119.5	21.6
1992	APR	285.1	1500.0	429.2	411.7	95.0	303.2	13.1
1992	MAY	372.9	1185.1	646.8	617.3	92.0	478.4	13.5
1992	JUN	230.8	795.8	580.5	577.8	92.0	457.5	13.1
1992	JUL	340.2	463.5	639.0	638.4	92.0	521.6	49.3
1992	AUG	291.0	143.3	588.3	610.1	82.0	507.4	59.2
1992	SEP	288.2	204.4	216.3	224.1	51.4	201.6	0.1
1992	TOTAL	3615.9		3702.1	3736.7		3071.4	542.6

Increased releases from American Falls were used to meet the diversion requirements

Increased Diversion

W-YR	MO	*--American Falls--* in	eom	out	*---Lake Walcott---* in	eom	out	Snake Milner
1992	OCT	286.1	577.3	173.2	190.0	30.0	194.5	18.4
1992	NOV	337.8	891.2	24.0	34.8	38.0	26.8	35.2
1992	DEC	323.9	1190.5	24.6	33.6	38.0	33.6	49.7
1992	JAN	291.2	1444.9	36.9	45.8	38.0	45.8	59.3
1992	FEB	297.9	1570.0	172.7	181.5	38.0	181.5	192.5
1992	MAR	270.6	1667.2	173.3	174.2	90.0	122.2	13.5
1992	APR	237.7	1500.0	379.0	361.5	95.0	253.0	13.1
1992	MAY	420.3	1235.1	644.1	614.6	92.0	475.7	13.5
1992	JUN	230.8	805.4	620.5	617.8	92.0	497.5	13.1
1992	JUL	340.2	419.6	692.3	691.7	92.0	574.9	49.3
1992	AUG	291.0	100.0	588.3	610.2	82.0	507.5	12.4
1992	SEP	288.2	113.9	264.9	272.7	45.4	256.2	0.1
1992	TOTAL	3615.8		3793.9	3828.5		3169.2	470.3

Did the increased diversions in WY1992 impact water availability in WY 1993?



Increase Diversions in the Recharge Case for 1992

Original Recharge

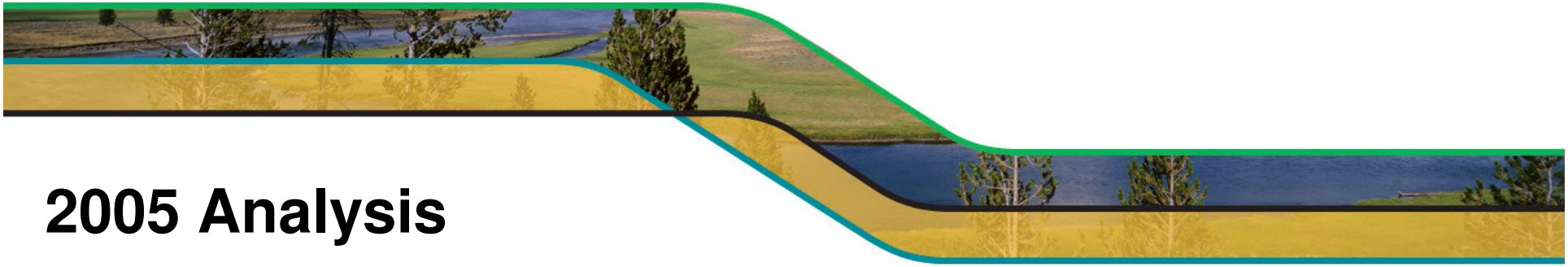
W-YR	MO	*--American Falls--* in	eom	out	*---Lake Walcott---* in	eom	out	Snake Milner
1993	OCT	271.4	352.7	118.3	119.9	30.0	117.4	18.4
1993	NOV	238.7	563.5	28.0	34.8	38.0	26.8	23.4
1993	DEC	288.2	827.0	24.6	32.1	38.0	32.1	33.9
1993	JAN	248.3	1050.7	24.6	35.9	38.0	35.9	41.4
1993	FEB	224.4	1241.8	33.3	47.6	38.0	47.6	51.0
1993	MAR	333.9	1531.5	44.2	66.6	60.4	44.2	13.5
1993	APR	319.0	1644.0	189.6	199.3	95.0	151.8	13.1
1993	MAY	618.3	1634.9	599.3	589.7	96.0	481.2	13.5
1993	JUN	868.6	1672.6	792.6	747.0	97.0	635.5	155.2
1993	JUL	374.1	1223.2	775.8	772.1	93.0	627.7	49.3
1993	AUG	412.0	870.0	735.0	731.1	90.0	625.0	59.2
1993	SEP	337.8	681.1	506.9	484.2	77.0	414.9	13.1
1993	TOTAL	4534.7		3872.2	3860.4		3240.2	485.1

Increased Diversion

W-YR	MO	*--American Falls--* in	eom	out	*---Lake Walcott---* in	eom	out	Snake Milner
1993	OCT	271.4	258.0	124.3	125.8	30.0	117.4	18.4
1993	NOV	238.7	470.2	26.6	33.4	38.0	25.4	22.0
1993	DEC	288.2	739.9	18.4	26.0	38.0	26.0	27.7
1993	JAN	248.3	963.6	24.6	35.9	38.0	35.9	41.4
1993	FEB	224.4	1165.8	22.2	36.5	38.0	36.5	39.9
1993	MAR	333.9	1455.5	44.2	66.6	60.4	44.2	13.5
1993	APR	319.0	1568.4	189.6	199.3	95.0	151.8	13.1
1993	MAY	618.3	1559.8	599.3	589.7	96.0	481.2	13.5
1993	JUN	868.6	1672.6	718.1	672.5	97.0	560.9	80.7
1993	JUL	374.1	1223.2	775.8	772.1	93.0	627.7	49.3
1993	AUG	412.0	870.0	735.0	731.1	90.0	625.0	59.2
1993	SEP	337.8	681.1	506.9	484.2	77.0	414.9	13.1
1993	TOTAL	4534.7		3785.0	3773.2		3147.0	391.9

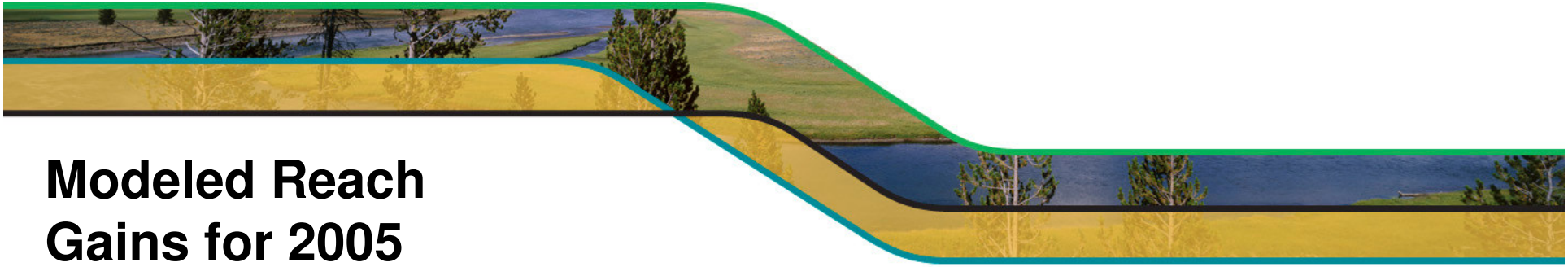
Once the reservoir fills the end of the year storage is the same

The increased diversions in 1992 does not appear to impact reservoir storage or delivery of water in the subsequent year



2005 Analysis

- 218,727 acft diverted for recharge and system conversions
  - October: 6,210
  - March: 35,724
  - April: 62,183
  - May: 52,203
  - June: 13,091
  - July 49,313
- Increase diversion into the Twin Falls Canal from 924,400 acft to 1,172,400 acft an increase of 248,000 acft.

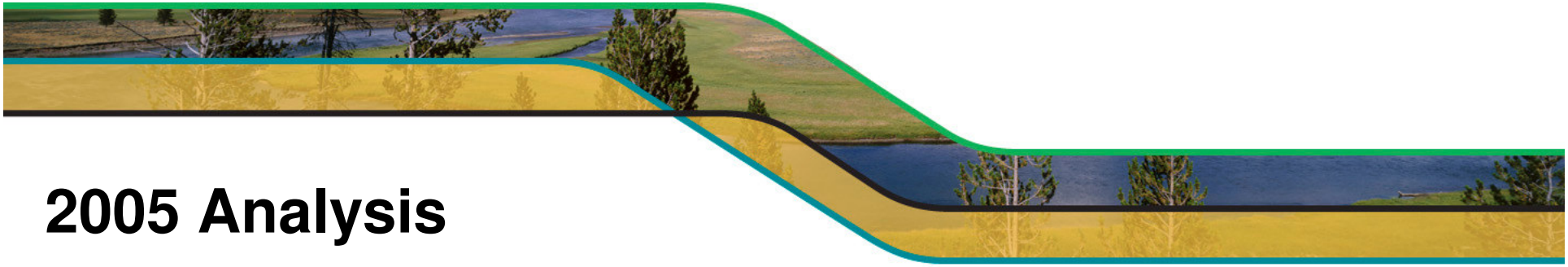


Modeled Reach Gains for 2005

Increased reach gains as a result of CAMP Implementation from 1980 through 2005

Reach Response for modeled year 2005												
	Response (cfs)											
Month	Ashton-Rexburg	Heise-Shelley	Shelly-Blackfoot	Blackfoot-Neeley	Neeley-Minidoka	Devils Washbow l- Buhl	Buhl- K Springs	K Springs	K Springs-Malad	Malad Reach	Malad-Bankroft	Total (cfs)
Oct	34	58	76	197	41	166	75	59	3	43	3	755
Nov	33	55	69	185	40	159	69	54	3	39	3	708
Dec	32	51	63	174	40	151	65	50	2	37	2	668
Jan	31	49	59	165	40	144	61	47	2	35	2	636
Feb	30	47	56	158	40	138	58	45	2	34	2	610
Mar	30	45	54	152	40	141	63	50	2	37	2	614
Apr	29	44	52	149	40	147	70	55	3	40	2	632
May	29	45	52	148	40	145	66	51	3	38	2	619
Jun	29	45	53	149	40	141	62	48	2	37	2	609
Jul	29	46	53	150	40	137	60	47	2	36	2	603
Aug	30	46	53	150	41	132	58	45	2	35	2	596
Sep	30	47	53	150	41	128	56	44	2	34	2	587
	Response (Acft)											
	21,272	28,712	32,401	96,532	32,725	68,202	32,129	25,533	1,292	19,990	1,619	
	Total Reach Gains Above Milner				211,644				Total Reach Gains		460,897	

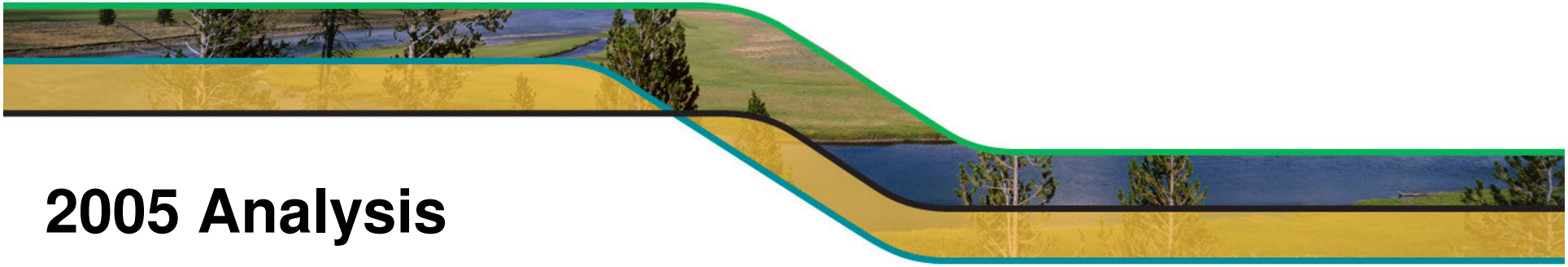
Total Model Inputs: 17,696,534 acft Yield: 14,581,591 acft Percent Yield: 82%



2005 Analysis

DIVERSIONS AND SHORTAGES WATER YEAR 2005

BRANCH	DIVERSIONS	RETURN FLOW	TOTAL SHORT	IRRIG SHORT	FLOW SHORT	OTHER SHORT
Falls River	109.6	7.4	0.0	0.0	0.0	0.0
Teton River	219.5	32.9	0.0	0.0	0.0	0.0
Henrys Fork	497.8	129.1	0.0	0.0	0.0	0.0
Above Lornzo	1515.7	0.7	0.0	0.0	0.0	0.0
Lornzo Blkft	1320.6	312.7	0.0	0.0	0.0	0.0
Willow Creek	209.7	210.0	3.1	3.1	0.0	0.0
Blkft Prtnf	175.6	29.3	10.5	0.0	6.0	4.5
Blkft Milner	3100.6	83.6	0.0	0.0	0.0	0.0
Milner Murphy	416.3	328.6	0.0	0.0	0.0	0.0
Boise River	715.8	0.0	0.0	0.0	0.0	0.0
New Y Canal	603.6	0.0	0.0	0.0	0.0	0.0
Payett River	883.5	1.0	0.0	0.0	0.0	0.0
Murphy Weiser	69.4	10.4	3.0	0.0	0.0	3.0
Weiser Anaton	0.0	0.0	0.0	0.0	0.0	0.0
Clear water	0.0	0.0	0.0	0.0	0.0	0.0
Anaton Icehbr	0.0	0.0	0.0	0.0	0.0	0.0
SYSTEM TOTAL	9837.7	1145.8	16.6	3.1	6.0	7.5

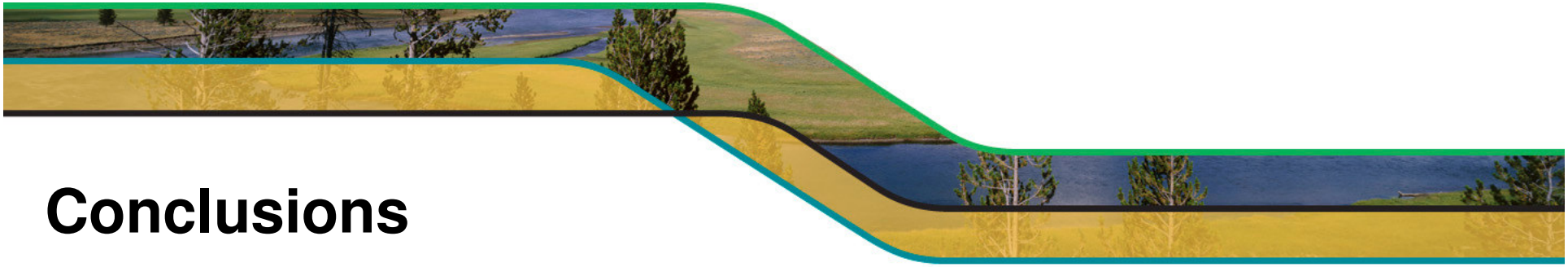


2005 Analysis

DIVERSIONS AND SHORTAGES WATER YEAR 2005

BRANCH	DIVERSIONS	RETURN FLOW	TOTAL SHORT	IRRIG SHORT	FLOW SHORT	OTHER SHORT
Falls River	109.6	7.4	0.0	0.0	0.0	0.0
Teton River	219.5	32.9	0.0	0.0	0.0	0.0
Henrys Fork	497.8	129.1	0.0	0.0	0.0	0.0
Above Lornzo	1515.7	0.7	0.0	0.0	0.0	0.0
Lornzo Blkft	1320.6	312.7	0.0	0.0	0.0	0.0
Willow Creek	209.7	210.0	3.1	3.1	0.0	0.0
Blkft Prtnf	175.6	29.3	10.5	0.0	6.0	4.5
Blkft Milner	3346.8	83.6	0.0	0.0	0.0	0.0
Milner Murphy	416.3	350.1	0.0	0.0	0.0	0.0
Boise River	715.8	0.0	0.0	0.0	0.0	0.0
New Y Canal	603.6	0.0	0.0	0.0	0.0	0.0
Payett River	883.5	1.0	0.0	0.0	0.0	0.0
Murphy Weiser	69.4	10.4	3.0	0.0	0.0	3.0
Weiser Anaton	0.0	0.0	0.0	0.0	0.0	0.0
Clear water	0.0	0.0	0.0	0.0	0.0	0.0
Anaton Icehbr	0.0	0.0	0.0	0.0	0.0	0.0
SYSTEM TOTAL	10083.9	1167.4	16.6	3.1	6.0	7.5

Increase diversions by 246.2 KAF but no increase in shortages



Conclusions

- The construction of the model restricts the diversion of water for recharge and system conversions to the top two layers of the reservoirs.
- Irrigation diversions are allowed to call water from all four layers of the reservoirs.
- The calculated flow of water at Milner controls the amount of water available for diversion to recharge and system conversions.
- In 1992 the diversion of water for CAMP implementation did not impact water availability for increased diversions (171,900 acft) for irrigation.
- In 2005 the diversion of water for CAMP implementation did not impact water availability for increased diversion (246,200 acft) for irrigation.

Questions?